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January 14, 2002

VIA FACSIMILE & FIRST CLASS MAIL

Dion Novak

Remedial Project Manager

United States Environmental Protection

BRUSSELS Agency

77 West Jackson Blvd., Mailcode SR-6J

Chicago, Illinois 60604-3590

Re: Eagle Zinc Company Site

LONDON Dear Dion:

NEWPORT BEACH

PARIS

Pursuant to Section VI.1. of the Administrative Order by Consent, dated December 31.

2001, for the above referenced site ("AOC"), the Respondents hereby notify U.S. EPA that

ENVIRON International Corporation will be the contractor performing the activities

required under the AOC and Roy Ball of ENVIRON will serve as the Project Coordinator.

Pertinent contact information for Dr. Ball and ENVIRON is as follows:

Roy O. Ball, P.E., Ph.D.

PHILADELPHIA ENVIRON International Corporation

740 Waukegan Road, Suite 401

PRINCETON Deerfield, Illinois 60015

WASHINGTON Phone: (847) 444-9200

FAX: (847) 444-9420

E-mail: rball@environcorp.com

Information regarding Dr. Ball and ENVIRON is attached.

We also would like to request that monthly progress reports be submitted by e-mail, with hard copies of the progress reports sent by regular mail to the three designated Agency recipients (Messrs. Novak, Lanham and Krueger).

Please call me or Dr. Ball if you have any questions.

Sincerely.

oseph Freudomberg

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cc: Thomas Krueger, Esq., USEPA
Rick Lanham, IEPA
Douglas J. Ucci, Eagle-Picher Industries, Inc.
Gordon S. Kuntz, Ph.D. The Sherwin-Williams Company
Lois Kimbol, Esq.



# **Corporate Overview**

An international technical and scientific consultancy, ENVIRON provides state-of-the-art scientific, engineering, and strategic risk management assistance to clients worldwide—including national and transnational industrial and commercial concerns, law firms, developers and property managers, trade associations, lending institutions, insurance professionals, and public sector agencies. Established in 1982 in Washington, D.C., the firm has thirty regional offices throughout the U.S., U.K., Europe, and Asia Pacific. ENVIRON also has established working relationships with a worldwide network of organizations that can assist us in meeting our clients' needs as appropriate.

Clients rely on us to address a wide variety of public health and environmental issues related to the presence of chemicals in the environment; in foods, drugs, medical devices, and consumer products; and in the workplace. Our staff consists of over 400 professionals with experience and expertise in a wide variety of disciplines, including engineering, geosciences, environmental sciences, life sciences, public health, and regulatory affairs. By drawing on the combined skills of these individuals, we are uniquely able to integrate health, environmental, and engineering data into comprehensive analyses with immediate decision-making utility.

ENVIRON offers strategic and technical support in the following areas:

#### **Environmental Sciences & Engineering:**

- Air Quality Management
- Compliance Assistance
- Engineering Design & Construction Management
- Environmental Due Diligence
- Environmental Impact Assessment
- EHS Management Services
- Litigation Support and Claims Recovery
- Risk Assessment
- Site Characterization & Remediation
- Solid & Hazardous Waste Management
- Water & Wastewater Quality Management

#### **Life Sciences:**

- Consumer Products
- Foods
- Litigation Support
- Medical Devices
- Pharmaceuticals
- Risk Assessment & Risk Management
- Toxicology & Epidemiology

Through the successful completion of over 10,000 assignments in about 50 countries, we have earned an international reputation as a credible, scientifically competent, and objective environmental and health sciences consulting firm and as a leader in developing creative solutions to our clients' most challenging problems.



# **Pertinent Project Experience**

ENVIRON offers highly qualified technical staff and cost-effective site investigation and remedial strategies. ENVIRON has gained an international reputation for assisting clients in cost-effectively evaluating and remediating industrial facilities and hazardous waste sites. ENVIRON provides a full range of site characterization, remedial investigation, remedial design, and remedy implementation services. We focus first on the threshold question of whether and why a site should be remediated before addressing the question of how to remediate. The process involves strategic planning, integrating regulatory and statutory requirements with business considerations, identifying specific risk-based project objectives, designing data collection programs, engineering a remedy, and representing clients before regulators and the public.

Descriptions of pertinent site investigation/remediation projects performed in Illinois and at Superfund sites are discussed in the following subsections.

# ■ Superfund Site

#### Michigan City, Indiana

On behalf of the potentially responsible parties, ENVIRON personnel conducted RI/FS activities at the Waste, Inc. Landfill Superfund Site located in Michigan City, Indiana. The site is composed of approximately 32 acres and is situated adjacent to Trail Creek. From 1966 to 1982, the landfill accepted approximately 128,000 tons of industrial wastes. ENVIRON personnel assisted the PRPs with the preparation of an Agreed Order on Consent for the work. Subsequently, ENVIRON personnel prepared RI Work Plans, including a Field Sampling Plan, Quality Assurance Project Plan, Health & Safety Plan, and Data Management Plan. ENVIRON personnel identified and received approval for a phased investigative approach. The first phase consisted of a comprehensive field screening program to reduce the quantity of laboratory analytical samples necessary to characterize the magnitude and extent of contamination. The field screening program included a fluorescence field screening method for the identification of semivolatile organic compounds developed by ENVIRON personnel specifically for use at the Waste, Inc. site. The field screening program was approved by the U.S. EPA. Additional investigative activities included on-site and off-site soil and ground water sampling, and Trail Creek surface water and sediment analysis. Following each phase of investigative activities, ENVIRON personnel prepared Technical Memoranda for submittal to the U.S. EPA. These Technical Memoranda included presentation of field methods and observations, analytical data, data analysis, geology and hydrogeology discussions, and other pertinent technical information. The U.S. EPA remedial project manager for the site was Mr. Dion Novak, the current RPM for the Hillsboro project. ENVIRON personnel also prepared the RI and initial FS reports for the site. ENVIRON personnel also conducted data validation activities, participated in negotiations with the U.S. EPA, presented technical options to the PRP technical and steering committees throughout the duration of their activities.

# Superfund Site

#### Zionsville, Indiana

A former commercial treatment, storage and disposal site on the National Priority List is being cleaned up under the direction of the USEPA Region 5 in the State of Indiana. ENVIRON has been retained by The Trustees as their technical representative to ensure that the construction



activities conducted for the remedial action were in compliance with the approved remedial design. Involvement to date includes engineering oversight of a remedial action involving the containment of contaminated soil with the use of an engineered cap and the installation of a soil vapor extraction system. Soil and ground water contamination consisted of volatile and semivolatile compounds, heavy metals and cyanide.

## Superfund Sites

#### Gary, Indiana

A 12-acre parcel and a 20-acre parcel in Gary, Indiana were used sequentially for solvent recovery and on-site disposal from 1955 through 1972. The surficial formation consists of approximately 30-40 feet of sand that includes the Calumet aquifer. The sites have residential neighbors and are adjacent to residential development in Hammond, Indiana. The RI/FS was negotiated as part of an Administrative Order on Consent, and was implemented over an 18month period at a cost of approximately \$750,000. As part of the RD/RA, ENVIRON performed construction oversight of two ground water recovery and treatment systems. Ground water contamination consisted of volatile and semivolatile organic compounds, pesticides, herbicides, polychlorinated biphenyls, heavy metals and cyanide. The extraction and treatment system included ground water pumping systems, oil/water separators, pre-filtration systems, hydrogen peroxide and ultraviolet light oxidation systems, air stripper, and polishing filtration systems, with a three-mile underground pipeline for effluent transportation to a 4,600-foot-deep injection well. Initial activities included design and construction of ground water collection and treatment systems. Continuing project activities include ongoing maintenance of the system equipment, troubleshooting of system malfunctions, monthly monitoring of the treatment system and annual monitoring of the ground water wells, and project coordination.

# **■ FAG Bearings Site**

#### Joplin, Missouri

ENVIRON was retained to investigate and delineate the source of TCE soil and ground water contamination on a 140 acre property. Initial identification of impact from the property was discovered after TCE had been discovered in a number of residential wells downgradient of the site. ENVIRON's role included evaluation of historical manufacturing processes to identify potential source areas, as well as implementing an extensive investigation of soil and ground water on the site in accordance with a consent order between the client and the state of Missouri. The primary source of contamination was a release from an underground transfer pipeline producing a dense non-aqueous phase liquid (DNAPL) in the source area. During the source of the investigation, the site was proposed for inclusion on the National Priorities List (NPL) and was subsequently placed on the NPL. ENVIRON has completed an Engineering Evaluation/Cost Assessment in support of a removal action at the site. The chosen removal action alternative is chemical oxidation using potassium permanganate. Implementation of the removal action alternative will begin during the 4<sup>th</sup> quarter of 2001.

# **Tool Manufacturing Facility**

#### Chicago, Illinois

ENVIRON's Chicago area offices conducted activities associated with the receipt of a No Further Remediation (NFR) letter under the SRP for a tool manufacturing site located in the Chicago area. As a condition of a property transfer, the seller was required to address chlorinated organic contaminants discovered during a Phase II assessment. ENVIRON worked with attorneys for



both the buyer and the seller to develop a plan to complete a site characterization and risk assessment that would allow the receipt of a Focused NFR for the manufacturing property and the adjacent property. ENVIRON conducted investigation activities and incorporated previously collected data to characterize the magnitude and extent of the impact. ENVIRON completed fate and transport calculations to identify the off-site properties potentially impacted by the volatile compounds. ENVIRON is currently preparing final documentation for submittal to the IEPA that is expected to result in the receipt of a Focused NFR without the need for active remediation, through incorporation of institutional controls, site land use controls, and local ground water use ordinances.

## ■ Industrial Property

#### Chicago, Illinois

A former light industrial building in Chicago was being renovated for professional/commercial office and light storage space. The former activities, including dry cleaning and machining, had created soil and shallow ground water contamination with primarily chlorinated volatile organics. The shallow ground water stratum, located at 8-12 feet Below Ground Surface, was contaminated at the downgradient property line above IEPA standards. ENVIRON conducted a Site Investigation that resolved all issues, without active remediation, except for the potential off-site ground water contamination. The potential off-site ground water could be resolved either by remediation (using HRC), risk transfer (using insurance) or by formal notification to potentially affected property owners. ENVIRON is proceeding with HRC-based remediation to reduce volatile organic contamination at the property line to non-notification levels.

## **■** Former Ink Manufacturing Plant

#### Bensenville, Illinois

An abandoned ink manufacturing plant in Bensenville, Illinois is in the process of being developed as a residential property based on negotiated risk-based cleanup objectives for polynuclear aromatic hydrocarbons (PNAs) and metals. The property, owned by the Village of Bensenville, will receive a No Further Remediation Letter from the State of Illinois for its participation in the Illinois SRP on completion of remediation based on an accepted work plan and accepted risk-based cleanup objectives. The risk-based cleanup objective for carcinogenic PNAs (expressed as benzo(a)pyrene equivalents) was based on a Monte Carlo exposure analysis of ingestion of soil and dust that considered the plans for future development, community-specific exposure information, and the expected natural degradation of the organic compounds over time. Statistical background concentrations were adopted as cleanup objectives for metals. Despite U.S. EPA acceptance of Monte Carlo methods for risk assessment, the IEPA was at first unwilling to accept Monte Carlo-derived cleanup objectives. The model equations and each input distribution were thoroughly explained and defended until both parties were satisfied that the resulting cleanup objectives are sufficiently conservative and protective of human health and the environment. The lower, or most conservative 90<sup>th</sup> percentile of the distribution of concentrations corresponding to an excess individual lifetime cancer risk of 1 x 10<sup>-6</sup> was selected. ENVIRON's work allowed the client to safely redevelop this abandoned industrial property for residential use.

## **■** Former Steel Fabrication Plant and Foundry

#### Bensenville, Illinois

An abandoned former steel fabrication plant and foundry located in Bensenville, Illinois is in the process of being redeveloped as a commercial property based on successful completion of the voluntary Illinois SRP. The property received a closure letter from the state of Illinois based on the selected remedy of natural attenuation in combination with engineered barriers and institutional controls. The Site was enrolled in the Illinois SRP in November 1996. Site investigation consisted of the collection of approximately 300 soil samples and a limited number of ground water samples. The residual contamination included polynuclear aromatic hydrocarbons (PNAs) and metals primarily in site soil. Risk-based cleanup objectives were negotiated with the Illinois Environmental Protection Agency (IEPA) based on the redevelopment plans for the property – service as a cargo distribution facility for O'Hare International Airport. The selected remedy for the site included capping of approximately 5 acres to limit exposure to residual metals contamination, natural attenuation (enhanced by the application of fertilizer and pH adjustment) of organic contaminants in soil, and an institutional control prohibiting the use of the water table aquifer on-site as a source of drinking water. Remediation is complete and the Site received a No Further Remediation Letter from the state in November 1997. No long-term monitoring for site soil or ground water is required. Through this process, ENVIRON:

- Negotiated site-specific risk-based cleanup objectives based on land use;
- Successfully negotiated a low-cost remedy based on enhanced natural attenuation, engineered barriers, and institutional controls;
- Closed a heavy industrial site in approximately one year at a cost of approximately \$300,000 (approximately \$70,000 for investigation and \$230,000 for negotiations and reporting).

A No Further Action Letter was subsequently issued for the site by the IEPA.



# Key Personnel

The RI/FS will be completed primarily by personnel based in ENVIRON's Deerfield, Illinois and St. Peters, Missouri offices. The primary project team will be comprised of Roy Ball, PhD., P.E. as Principal in Charge, Ross Jones, P.G. as Project Manager, Scott Hayter, P.G. as Field Task Manager, and Janet Kester, Ph.D. as Risk Assessment Manager. To the extent possible, ENVIRON will provide field personnel located in our St. Peters, Missouri office, which is located approximately 1.5 hour from the site. ENVIRON will also enlist the assistance of several additional key consultants with expertise in the areas of risk assessment, evaluation of remedial alternatives, modeling exercises and other disciplines. Subcontractors will be retained for the tasks involving laboratory analysis, drilling, test excavations in residual piles, surveying, and the ecological field survey. A brief discussion of the experience of the project team and other key ENVIRON personnel are included below. Complete resumes for each are provided in Attachment 2.

The primary members of the project team will consist of:

## ■ Roy O. Ball, Ph.D., P.E., Principal

Dr. Ball has 30 years of experience in environmental engineering, with particular emphasis in industrial and hazardous waste management, chemical fate and transport, site investigation and remediation, environmental due diligence, and litigation support. His wide-ranging experience includes investigation and remediation of state and Federal Superfund sites and other industrial properties; risk management and decision making related to critical environmental issues; designing hazardous waste management facilities and managing remediation plans at hazardous waste management facilities and industrial properties; and litigation support expert witness work focusing on assessment and allocation of remediation costs, the origin and timing of contaminant releases, remedial strategies, and the standard of practice related to environmental due diligence, site characterization, and site remediation.

## **■** F. Ross Jones, P.G., Manager

Mr. Jones is a Manager at ENVIRON Corporation. He has 13 years of experience in designing and implementing contaminated site investigations and remedial actions, as well as completing environmental due diligence projects at commercial and industrial sites. While at ENVIRON, Mr. Jones has managed projects at several sites subjected to the Industrial Site Recovery Act (ISRA) and other regulatory programs. Mr. Jones has also managed Phase II investigations at a number of sites and compliance activities at Superfund Sites in Illinois and Indiana. Prior to joining ENVIRON, Mr. Jones was a Senior Hydrogeologist at BCM Engineers Inc. in Burlington, New Jersey. His work at BCM primarily involved conducting and managing site investigation and remediation projects at industrial facilities in New Jersey. While at BCM, Mr. Jones served as the Manager of Site Investigations for a Remedial Investigation involving 23 chromium sites in Hudson County, New Jersey. He received an M.S. in Geology from The State University of New York at Albany, and a B.S. in Geology from Franklin and Marshall College.

# ■ Scott C. Hayter, P.G., Senior Associate

Mr. Hayter is a Senior Associate at ENVIRON International Corporation with over eight years of experience in environmental geology and hydrogeology. His work here has included technical litigation support for matters involving soil and ground water contamination, including document review, data calculation and analysis. Mr. Hayter has also conducted Phase I and Phase II environmental assessments, remedial investigations as well as the supervision of remedial actions. Mr. Hayter has conducted Phase II due diligence audits, assisted in the development and implementation of sampling plans, conducted well searches downgradient from spill sites, and performed surface and subsurface radiological surveys. Prior to joining ENVIRON, Mr. Hayter worked at University of Waterloo, Environment Canada, and Golder Associates as an intern. His duties included ground water sampling, laboratory analysis of lake-bottom sediments, and soil and concrete testing. He has a B.Sc. in Earth Science from the University of Waterloo in Ontario, Canada. Mr. Hayter is currently pursuing a Masters degree in Environmental Engineering through Marquette University.

## ■ Janet E. Kester, Ph.D., Senior Science Advisor

Dr. Kester is a toxicologist with fourteen years' experience in the development of innovative and cost-effective approaches to environmental risk analysis and management, including toxicology, ecological and human health exposure and risk assessment, litigation support, and risk-based corrective action. She has extensive experience with risk assessment and management issues at chlorinated solvent, pesticide, petroleum, mining, and other kinds of hazardous waste sites. An ASTM-certified RBCA trainer, Dr. Kester is also a co-author of the ASTM's Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites (RBCA; ASTM, 1995) and the draft Guide for Risk-Based Corrective Action ('RBCA II'). Dr. Kester's doctoral and post-doctoral work involved examination of the aryl hydrocarbon (Ah) receptor and its interaction with 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) and related compounds, and the effects of this compound on gene expression in thymus cells. She developed and taught graduate courses in toxicology as an Adjunct Professor at the Rochester Institute of Technology and an Associate of Toxicology at the University of Rochester. Dr. Kester has provided technical and strategic guidance and support for toxicology and risk assessment projects, and is responsible for oversight of risk assessment work

Other ENVIRON personnel who may provide assistance with certain project tasks include:

## ■ John P. Imse, P.G., Principal

Mr. Imse is a Principal at ENVIRON International Corporation's St. Peters, Missouri office. Mr. Imse has over 20 years experience in consulting. His environmental experience has focused on land pollution control, specifically the geologic and hydrogeologic evaluation of comptex site settings to delineate potential sources of impact, to characterize the extent and severity of that impact, and to determine the ultimate fate of environmental impact. His experience has included CERCLA and RCRA project management, regulatory agency negotiation, state voluntary investigation/remediation programs, private party allocation negotiations, litigation support, and expert witness testimony. Mr. Imse holds an M.S. in Geology from Idaho State University and is a Registered/Certified Professional Geologist in ten states.

## ■ Ronald E. Hutchens, P.E., Principal

Mr. Hutchens is a Manager at ENVIRON International Corporation. He has 30 years experience in civil and environmental engineering, with particular emphasis in soil and ground water quality investigations, construction management, risk based assessment and remediation. Mr. Hutchens has performed the overall project management including agency negotiations, design and construction management of the implementation of a consent decree at two Superfund sites in Indiana; developed and implemented remediation plans for soil and ground water clean up in the voluntary programs in Illinois and Indiana; supervised the construction quality assurance oversight at the construction of numerous landfill cells; reviewed closure documentation for numerous sanitary landfills; and has assisted several PRP groups with strategy for developing and fulfilling consent decrees. Before joining ENVIRON, Mr. Hutchens was the Chief Operation Officer for the development of a new Greenfield's Subtitle D Landfill located in Illinois. Mr. Hutchens has a B.S. in Civil Engineering from Bradley University and is a registered professional engineer in the States of Illinois, Indiana, Kentucky and Tennessee.

## ■ David A. Schlott, P.E., Principal

Mr. Schlott is a Principal of ENVIRON International Corporation. He has 25 years of consulting, engineering, and project management experience, focusing on the environmental management needs of industrial and manufacturing concerns, including 11 years as corporate environmental services and engineering manager for a Fortune 100 pharmaceutical company with more than 50 operations worldwide; and 14 years as a consulting environmental engineer. Recently, Mr. Schlott designed a statistical sampling approach used by the Peoples Gas Light and Coke Company for their quality assurance/quality control (QA/QC) plan associated with People's residential mercury inspection program.

